TABLE I-continued

	A	B	C	D	E	F	G	H
Metal Phenate	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
neutral CaSulfonate	—	0.28	—	—	0.28	—	0.8	0.28
nonylphenylsulfide	—	—	0.32	—	0.32	0.32	—	0.32
friction modifier(etheramine)	—	—	—	0.10	—	0.10	0.10	0.10
Corrosion Bench Test	(as described in ASTMD4485)							
Cu, ppm	0	5	7	5	7	9	4	8
Pb, ppm (corr)	0	3.3	14.1	5.0	14.1	25.7	7.7	24.8

The above table illustrates the benefits of the instant invention in affording superior corrosion inhibition.

EXAMPLE 2

The corrosion bench test (as above) was conducted to determine if conventional antioxidants, such as thiadiazoles, would yield satisfactory results. The results are shown in the following table.

TABLE II

COMPONENT	A	B	C	D	E
Dispersant	3.9	3.9	3.9	3.9	3.9
Metal Phenate	0.3	0.3	0.3	0.3	0.3
Thiadiazole	—	0.06	0.12	0.06	0.06
Neut CaSulfonate	—	—	—	0.28	—
Nonylphenolsulfide	—	—	—	—	0.32
CORROSION BENCH TEST					
Cu ppm	0	5	5	5	36
Pb, ppm (corr.)	0	1.7	1.7	3.1	35.3

The above results show that when conventional antioxidants, such as thiadiazoles, are used in the instant lubricating oils, corrosion control is not afforded.

What is claimed is:

1. A lubricating oil for use in heavy duty diesel engines comprising an admixture

(A) a major amount of an oil of lubricating viscosity

(B) at least 4 mass % dispersant,

(C) at least 0.3 mass % of a metal phenate,

(D) less than 0.1 mass % friction modifier,

(E) less than 0.3 mass % of ashless sulfurized phenols,

(F) less than 0.12% neutral calcium sulfonate.

2. The lubricating oil of claim 1 wherein the oil has a sulfated ash content of about 0.35 to about 2 mass %.

3. The lubricant of claim 1 further characterized by having no more than 0.2 mass % active ingredient of aromatic amines having at least two aromatic groups attached directly to the nitrogen.

4. The lubricant of claim 1 further comprising a boron containing additive in an amount that provides at least 100 ppm (mass) boron.

5. The lubricant of claim 4 wherein said dispersant is a nitrogen-containing dispersant and the lubricant has a boron-to-nitrogen mass ratio of at least 0.1.

6. The lubricant of any of claims 1–5 wherein the lubricant further comprises Overbased metal sulfonate.

7. The lubricating oil of claim 6 wherein the metal sulfonate is magnesium sulfonate.

8. A concentrate comprising an admixture of:

(A) at least 32 mass % dispersant,

(B) at least 2.4 mass % of a metal phenate,

(C) less than 1.6 mass % friction modifier

(D) less than 1.96 mass % of ashless sulfurized phenols,

(E) less than 0.94 mass % calcium sulfonate.

9. A heavy duty diesel lubricating oil comprising a major amount of an oil of lubricating viscosity and

(A) at least 4 mass % dispersant,

(B) at least 0.3 mass % of a metal phenate,

(C) less than 0.1 mass % friction modifier,

(D) less than 0.3 mass % of ashless sulfurized phenols,

(E) less than 0.12% neutral calcium sulfonate.

10. A concentrate comprising:

(A) at least 32 mass % dispersant,

(B) at least 2.4 mass % of a metal phenate,

(C) less than 1.6 mass % friction modifier

(D) less than 1.96 mass % of ashless sulfurized phenols,

(E) less than 0.94 mass % calcium sulfonate.

11. The lubricating oils of claims 1, 8, 9, or 10 further comprising (G) a metal dithiophosphate.

12. The lubricating oil of claim 11 wherein at least 50 mole % of the hydrocarbyl groups on the metal dithiophosphate are secondary.

13. The lubricating oils of claims 1,8,9 or 10 comprising less than 0.3 mass % sulfurized ester.

14. A method for controlling corrosion in diesel engines comprising using the oil of claim 1.

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